

# Montana DEQ Forest Fire Smoke Advisory

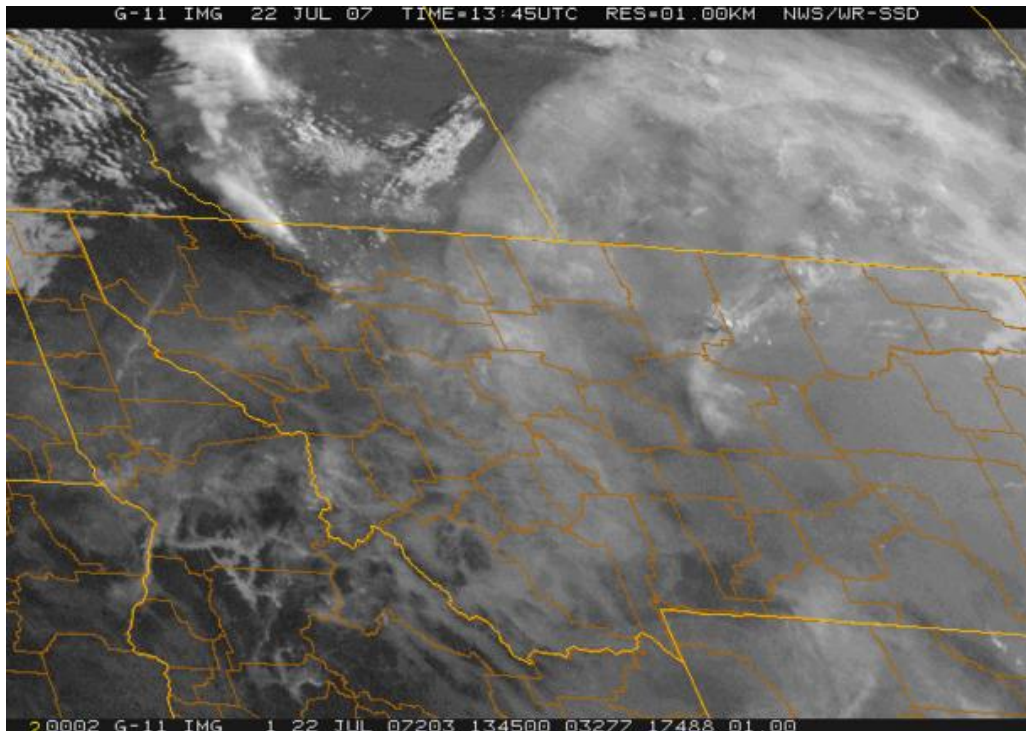
## July 22 2007

### 10:00 AM Sunday

#### Current Situation

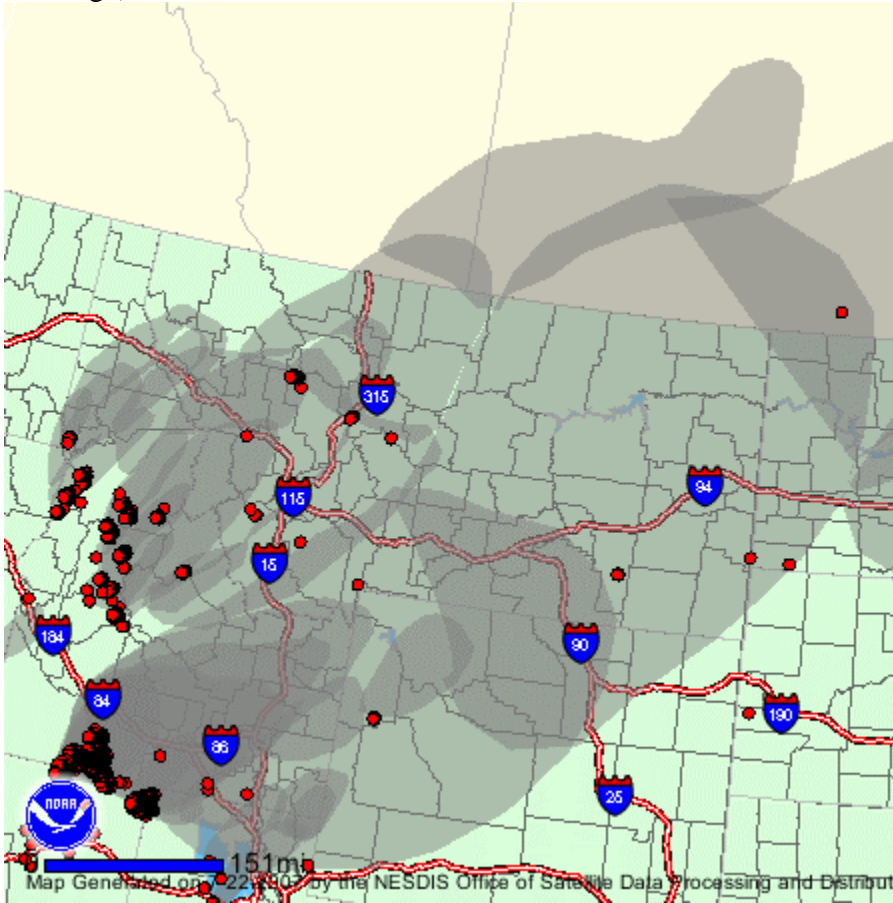
There is a huge plume of smoke aloft easily visible on this morning's satellite photo. The smoke was produced yesterday afternoon and evening in Idaho where well over 10,000 acres were burned yesterday. The plume is slowly moving up into Canada and North Dakota as it rotates over the top of a massive ridge of high pressure centered over the state. Residual smoke from the passage of the smoke aloft is lingering in the valleys of western and southwestern Montana. UNHEALTHY FOR SENSITIVE conditions are currently impacting Hamilton and Butte while MODERATE conditions are currently impacting Missoula, Helena, Dillon, Great Falls and the surrounding areas. There is also some local smoke near the active fires in the state and UNHEALTHY levels are worse are expected there. More smoke will mix down to the surface later this morning, and increased fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke

is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

[http://activefiremaps.fs.fed.us/lg\\_fire2.php](http://activefiremaps.fs.fed.us/lg_fire2.php)

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

# Updated 10 AM July 22, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Butte T8 Hamilton T8
MODERATE	Missoula T8 Helena T8 Great Falls Vis(1) Dillon Vis(4)

T1(x)            One-hour TEOM or BAM value (number of values)  
T8(x)            Eight-hour average TEOM or BAM value(number of values)  
T24            24 hour average TEOM or BAM value  
Vis(x)           Visibility value(number of hours)  
Vis(am/pm)    Visibility value from twice/day reporting stations  
(est)           estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

## Forecast

The plume aloft will be very slowly moving off throughout the day and areas of Eastern and Northeastern Montana will see noticeable impacts at the surface under the plume as the day heats up and the mixing height reaches the smoke layer. Intense but temporary impacts are likely under the thickest parts of the smoke aloft. Southwest flow along the western border of the state will continue to feed smoke into western and southwestern Montana today and this afternoon. Conditions there will continue to degrade for a few hours this morning but should improve significantly by this afternoon as the dispersion will be pretty good with high mixing heights for a few hours. Later this afternoon and into the evening, more smoke is expected and smoke levels will rise again. Hazy sky conditions will impact all of the state except for the northwestern corner of the state. Local impacts from the active fires in the state will also be of concern today. Poor dispersion for most of the day and light winds will keep the smoke impacts limited to the immediate vicinity of the active fires and conditions in those areas could be very poor. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield  
Meteorologist  
Montana Department of Environmental Quality

[Jcoefield@mt.gov](mailto:Jcoefield@mt.gov)